

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF THE CLAIMS

1. (Currently Amended) A method for strengthening the structure of a protein-containing food product during a pasteurization heat treatment of said product by forming disulfide bonds between a modified protein and protein in the protein-containing food product to form a protein ~~space~~-network, the method comprising:

modifying an unmodified protein by cleaving at least one disulfide bond originally present in the unmodified protein, to obtain the modified protein having free sulfhydryl groups;

adding the modified protein and another unmodified protein to the protein-containing food product to form a mixture; and

heating the mixture for 15 minutes or less to cause an interchange reaction that forms structure strengthening disulfide bridges between the modified protein and protein in the protein-containing food product.

2. (Previously Presented) The method of claim 1, wherein said heating time is 15 seconds to 14 minutes.

3. (Previously Presented) The method of claim 1 wherein said heating temperature is 70-85 °C.

4. (Previously Presented) The method of claim 1 wherein said modified protein is produced by contacting an unmodified protein with a sulfite ion forming reagent to sulfonate said protein.).

5. (Previously Presented) The method of claim 1 wherein the amount of free sulfhydryl groups in the total protein of the product before the interchange reaction is 0.5-60 $\mu\text{mol/g}$ protein.

6. (Previously Presented) The method of claim 1 wherein said modified protein comprises whey protein or soy protein.

7. (Previously Presented) The method of claim 1 wherein said food product is yoghurt, pudding, spread, other milk product, dough, animal fodder or pet food.

8. (Currently Amended) A method for ~~preparing~~ strengthening a protein-containing food product ~~having free sulfhydryl groups~~, the method comprising:

forming a modified protein having free sulfhydryl groups by cleaving at least one disulfide bond originally present in a first unmodified protein to obtain the modified protein having free sulfhydryl groups;

adding the modified protein and a second unmodified protein to said the protein-containing food product to form a mixture, which protein is modified by cleaving at least one disulfide bond originally present in said protein to obtain free sulfhydryl groups; and

heating said mixture for 15 minutes or less, wherein interchange reactions occur between the modified protein, the second unmodified protein, and the food product to form a protein network that strengthens the food product to cause an interchange reaction by said free sulfhydryl groups to further cleave other disulfide bridges between the modified protein and protein in the protein-containing food product to obtain free sulfhydryl groups.

9. (Previously Presented) The method of claim 8, wherein said heating time is 15 seconds to 14 minutes.

10. (Previously Presented) The method of claim 8 wherein said heating temperature is 70-85 °C.

11. (Currently Amended) A protein-containing food product comprising a protein ~~space~~-network strengthening the structure of said product, which network is formed by adding an unmodified protein and a modified protein to the protein-containing food product and heating for 15 minutes or less; wherein the modified protein is a whey protein or soy protein and has been modified by cleaving at least one disulfide bond originally present in the protein.

12. (Previously Presented) The protein-containing product of claim 11, wherein said heating time is 15 seconds to 14 minutes.

13. (Previously Presented) The protein-containing product of claim 11 wherein said heating temperature is 70-85 °C.

14. (Previously Presented) The protein-containing product of claim 11 wherein said modified protein is produced by contacting an unmodified protein with a sulfite ion forming reagent to sulfonate said unmodified protein.

15. (Previously Presented) The protein-containing product of claim 11 wherein the amount of free sulfhydryl groups in the mixture before the interchange reaction is 0.5-60 $\mu\text{mol/g}$ protein.

16. (Cancelled).

17. (Previously Presented) The protein-containing product of claim 11 wherein said food product is yoghurt, pudding, spread, other milk product, dough, animal fodder or pet food.

18. (Currently Amended) A ~~protein-containing food product, wherein said product comprises free sulfhydryl groups created by~~method of strengthening a milk product, comprising:

adding an unmodified protein and a modified protein to the ~~protein-containing food~~milk product to form a mixture, the modified protein being a whey protein or soy protein which has been modified by cleaving at least one disulfide bond originally present in said protein to obtain free sulfhydryl groups; and

heating the mixture for 15 minutes or less to ~~further cleave other disulfide bonds in the mixture to obtain the protein-containing food product~~form a protein network in the milk product.

19. (Currently Amended) The ~~protein-containing product~~method of claim 18 wherein said heating time is 15 seconds to 14 minutes.

20. (Currently Amended) The ~~protein-containing product~~method of claim 18 wherein said heating temperature is 70-85 °C.

21. (New) The method of claim 8, wherein the first unmodified protein and the second unmodified protein are the same.